

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference ...	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 02/ 00476	International filing date (day/month/year) 03/01/2002	(Earliest) Priority Date (day/month/year) 30/01/2001
Applicant THEOHARIDES, Theoharis C.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

## 1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K31/737 A61P19/02 A61P29/00 //(A61K31/737,31:352)

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim.No.
X	US 5 876 744 A (DELLA VALLE FRANCESCO ET AL) 2 March 1999 (1999-03-02) * See example 19, dermatologic gel comprising chondroitin sulfate, quercetin and dermatan sulfate * column 15, line 44	1,2,4,5, 9,13,19
X	US 6 162 787 A (NAKAMURA ROBERT M ET AL) 19 December 2000 (2000-12-19) column 5, line 15-22 See formula 1 and 5 claim 1	1,2,4,7, 9

-/--

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## ° Special categories of cited documents :

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\* &amp; \* document member of the same patent family

Date of the actual completion of the international search

20 November 2002

Date of mailing of the international search report

16/12/2002

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Veronese, A

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 972 999 A (MURAD HOWARD) 26 October 1999 (1999-10-26)  * See example 3, comprising chondroitin sulfate, quercetin and D-glucosamine sulfate * example 3  ---	1,2,4,5, 7,13,18, 19,21-23
X	WO 98 33494 A (KOSBAB JOHN V) 6 August 1998 (1998-08-06) claims 1,4,7,10,14,23  ---	1,2,4,9, 13
X	WO 00 78320 A (JOINT JUICE INC) 28 December 2000 (2000-12-28) tables 1,2 page 2, line 2,7,27 page 4, line 22,25 page 7, line 15,16  ---	1,2,4,7, 9,10
X	DATABASE WPI Derwent Publications Ltd., London, GB; AN 2001-358435 XP002221703 "Compositions comprising hyaluronic acid and flavonoids" & IT 1 290 440 A (ALLEGRA L), 1997 abstract  ---	1,2
A	WO 93 09766 A (ARTHRO RES & DEV CORP) 27 May 1993 (1993-05-27) claim 1  ---	3
A	CHEMICAL ABSTRACTS, vol. 108, no. 10, 7 March 1988 (1988-03-07) Columbus, Ohio, US; abstract no. 81913y, DORA RODRIGUEZ ET AL: "Preparation of chondroitin sulfate from shark cartilage" XP002150348 abstract & REV. CUBANA FARM, vol. 21, no. 2, 1987, pages 133-140,  ---	3
Y	DATABASE WPI Section Ch, Week 197836 Derwent Publications Ltd., London, GB; Class B05, AN 1978-63500A XP002221704 "Topical antiinflammatory composition for skinburns" & CA 1 036 941 A (NASTASI J), 22 August 1978 (1978-08-22) abstract  ---	1-39
	---	-/--

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 1 273 669 A (PRITTIE R. W.) 1918 page 1, line 24-26 ---	1-39
Y	DE 198 39 443 A (GHYCZY MIKLOS) 2 March 2000 (2000-03-02) claims 1,6 ---	1-39
Y	DE 40 00 070 A (ASTA PHARMA AG) 12 July 1990 (1990-07-12) claims ---	1-39
Y	WO 94 13677 A (PFIZER ;CHEN YUHPYNG LIANG (US)) 23 June 1994 (1994-06-23) the whole document ---	1-39
Y	US 5 843 959 A (BERGERON JR RAYMOND J) 1 December 1998 (1998-12-01) the whole document ---	1-39
Y	DE 34 43 858 A (BIOREX LABORATORIES LTD) 13 June 1985 (1985-06-13) the whole document ---	1-39
Y	COUNCIL OF EUROPE, PUBLIC HEALTH COMMITTEE: "Resolution AP-CSP (00)9" 2000 , EUROPEAN UNION , BRUSSEL XP002221754 the whole document -----	1-39

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5876744	A	02-03-1999	IT 1273742 B AU 3254495 A EP 0773779 A1 CA 2196562 A1 WO 9603973 A1	09-07-1997 04-03-1996 21-05-1997 15-02-1996 15-02-1996
US 6162787	A	19-12-2000	NONE	
US 5972999	A	26-10-1999	US 5804594 A	08-09-1998
WO 9833494	A	06-08-1998	AU 6141498 A EP 1021177 A1 JP 2001511153 T WO 9833494 A1 US 2001031744 A1	25-08-1998 26-07-2000 07-08-2001 06-08-1998 18-10-2001
WO 0078320	A	28-12-2000	US 6391864 B1 AU 7132000 A WO 0078320 A1 US 6432929 B1	21-05-2002 09-01-2001 28-12-2000 13-08-2002
IT 1290440	A	25-09-1998	IT MI970705 A1	25-09-1998
WO 9309766	A	27-05-1993	CA 2100657 A1 EP 0571597 A1 WO 9309766 A1	16-05-1993 01-12-1993 27-05-1993
CA 1036941	A	22-08-1978	CA 1036941 A1	22-08-1978
US 1273669	A		NONE	
DE 19839443	A	02-03-2000	DE 19839443 A1 AU 1029500 A WO 0012071 A2 DE 19981729 D2	02-03-2000 21-03-2000 09-03-2000 09-08-2001
DE 4000070	A	12-07-1990	DE 4000070 A1 AT 113208 T AT 111735 T AU 618443 B2 AU 4786290 A CA 2007480 A1 DE 59007288 D1 DE 59007531 D1 DK 378086 T3 DK 533213 T3 EG 19912 A EP 0378086 A2 EP 0533213 A1 ES 2063841 T3 ES 2061307 T3 HK 50495 A HK 50595 A IE 65336 B1 JP 2288827 A JP 2991733 B2 MC 2078 A PT 92821 A , B	12-07-1990 15-11-1994 15-10-1994 19-12-1991 19-07-1990 17-07-1990 27-10-1994 01-12-1994 12-12-1994 17-10-1994 31-05-1996 18-07-1990 24-03-1993 16-01-1995 01-12-1994 13-04-1995 13-04-1995 18-10-1995 28-11-1990 20-12-1999 07-01-1991 31-07-1990

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 4000070	A		SG 9590510 A2	18-08-1995
			SG 9590512 A2	18-08-1995
			US 5110814 A	05-05-1992
WO 9413677	A	23-06-1994	AT 195738 T	15-09-2000
			AU 680226 B2	24-07-1997
			AU 5728194 A	04-07-1994
			BR 9307648 A	25-05-1999
			CA 2150709 A1	23-06-1994
			CN 1094048 A ,B	26-10-1994
			CZ 9501586 A3	15-11-1995
			DE 69329296 D1	28-09-2000
			DE 69329296 T2	28-12-2000
			DK 674642 T3	18-09-2000
			EG 20273 A	31-05-1998
			EP 0674642 A1	04-10-1995
			ES 2150482 T3	01-12-2000
			FI 935675 A	18-06-1994
			GR 3034507 T3	29-12-2000
			HU 70426 A2	30-10-1995
			IL 107944 A	06-12-2000
			JP 2862375 B2	03-03-1999
			JP 7509728 T	26-10-1995
			KR 167395 B1	15-01-1999
			KR 225720 B1	15-10-1999
			NO 952399 A	16-08-1995
			NZ 259114 A	24-03-1997
			PL 309359 A1	02-10-1995
			PT 674642 T	31-01-2001
			RU 2124016 C1	27-12-1998
			TW 444018 B	01-07-2001
			WO 9413677 A1	23-06-1994
			US 6218397 B1	17-04-2001
			ZA 9309405 A	15-06-1995
US 5843959	A	01-12-1998	NONE	
DE 3443858	A	13-06-1985	DE 3443858 A1	13-06-1985
			FR 2555899 A1	07-06-1985
			GB 2150435 A ,B	03-07-1985
			JP 3033126 B	16-05-1991
			JP 60136514 A	20-07-1985